

ABRAMS'S ILLUSTRATED FLORA OF THE PACIFIC STATES.—Not only the army of professional and amateur botanists of the Pacific States but all of us who have long appreciated the scholarly work of Professor LeRoy Abrams will breathe the easier now that the 2nd volume of his great Illustrated Flora¹ is actually out. The form has been changed, with all the line-drawings gathered into separate pages, a saving of both space and expense and, some will think, an improvement; and there is, most happily, a larger proportion of excellent and evidently accurate new illustrations, the first volume often predominantly with copied drawings (*Potamogeton*, the *Cyperaceae*, etc.). In the new volume these misfit, stiffer and often misleading drawings (for instance in *Lycopodium*, where the illustrations of *L. inundatum*, *L. complanatum* and *L. annotinum* are scarcely of typical forms of the species) seem relatively few, the small new drawings having evidently been planned by the author or a botanical helper, not left to the doubtful botanical acumen of the draftsman. They are, consequently, bound to be really helpful; the author and publisher are to be congratulated on the success with which they have come out on relatively unglazed paper. No one with half an eye for details can now go far astray in identifying his plants.

The treatments are conservative and the nomenclature and recognition of families, genera and species along the lines approved by the best international usage, though in debatable cases, like the recognition of *Parnassiaceae* and *Grossulariaceae* as families, the more liberal choice is made, with *Grossularia* and *Ribes* kept apart as genera (these treatments by Coville). On the other hand, *Astragalus* and *Potentilla* are kept intact. Other groups are treated by specialists: *Lupinus* kept down to 84 species by Charles Piper Smith, the many so-called genera of the *North American Flora* reassembled as the single genus *Saxifraga* by Rimo Bacigalupi, and *Ranunculus* very conservatively treated by Lyman Benson, while many recent propositions in that prolific source of supposed novelties, *Eriogonum*, are reduced, leaving the modest score of 80 recognized species. The treatments of some other groups by specialists are acknowledged.

In the treatment of the term "subspecies" which, especially in the western half of the United States has been debased from its proper and dignified status and made absolutely inseparable from the time-honored *varietas*, the author has left the user in perplexity. He personally calls geographic varieties and, one cannot help thinking, some mere forms, "subspecies" but side-by-side with them he admits, without transfer to that rank, variations which have been put out as "vars." Thus (p. 151) *Arenaria macradenia* has two variations described: var. *Parishiorum* Robinson (1894) and subsp. *Ferrisiae* Abrams, subsp. nov. Again, under *Eriogonum deflexum* (p. 34) we get "subsp. *Watsonii*", which "differs chiefly from the typical species in the more slender and longer . . . peduncles", not a degree of difference which is strikingly more significant than that shown in "var. *brachypodum*", next following it and "with the habit of the typical species . . . but the branches, peduncles and involucre glandular instead of glabrous", while of "var. *brachypodum*" we are told that "This subspecies ranges from Inyo County . . . to western Arizona and Lower California". Just such cases give the whole thing away. Some of our western friends who have suddenly adopted "subspecies" see no difference between them and the varieties of more conventional botanists of nearly two centuries, while they ignore the proper use of the dignified and long-used term subspecies for variations of much higher rank. It was hoped that in a work by so scholarly a student as Abrams this fad of the hasty, ill-advised and misinformed would get exposed. Just because a term is relatively new and is used by some zoölogists it does not follow that it is clearer, unless it really clarifies. The

¹ LEROY ABRAMS. Illustrated Flora of the Pacific States, Washington, Oregon, and California. In four volumes, Vol. II. Polygonaceae to Krameriaceae. 1944 Stanford University Press, Stanford University, Calif. i-viii + 635 pp. \$7.50.

user of this Illustrated Flora can only become needlessly and hopelessly perplexed. If his intellectual befuddlement is sufficient to make him wish some relief he might turn to RHODORA, xlii. 239–246 (1940) and *ibid.* xliv. 154–167 (1942), where the real meanings of these terms are discussed. He may not wish to be so “old-fashioned” as to follow long-established usage; he can, however, if he cares to do so, understand how confused have become some of our western friends and how far they have wandered off the beaten path.

Naturally the eastern botanists can hardly check the detailed treatments of strictly western groups. In cases of transcontinental or semi-cosmopolitan plants and those which were first described from one of the original 13 states, it is natural that he should note the treatments in groups which he has personally investigated. On p. 53 appears *Rumex persicarioides* with an illustration as fig. 1439 and the stated range: “British Columbia to southern California and across the continent. Closely related to *R. maritimus* L. of the Old World. Recently our plants have been referred to *R. fueginus* Philippi of Chile, by Rech. f. Field Mus. Bot. Ser. 17: 136. 1937. Type locality: Virginia.” Now, as distinctly shown by St. John, RHODORA, xvii. 73–80, pl. 113, figs. 5 and 6 (1915), *R. persicarioides* is strictly of the Atlantic coast, a very local and definite plant, now known only at scattered stations from the lower St. Lawrence to Virginia. The transcontinental plant, well illustrated by Abrams, was, I think correctly, treated and illustrated (his figs. 3 and 4) by St. John as *R. maritimus* var. *fueginus* (Phil.) Dusén, Svenska Exped. till Magellansl. iii. no. 5: 194 (1900). St. John also published from Washington State *R. maritimus* var. *athrax* St. John. This did not get noted in the new Illustrated Flora.

On p. 56 the synonym of *Polygonum Fowleri* Robinson is “*Polygonum Rayi*, American authors, not Babington”. So far as *P. Fowleri* was originally misidentified as *P. Raii* that is correct, but it leaves the impression that the latter species is not American. That need not disturb the botanist of the Pacific coast but those who know the abundance of true *P. Raii* about the Gulf of St. Lawrence and in Nova Scotia might well wonder. The occurrence of *P. Raii* in America was emphasized in RHODORA, xv. 71, 72 (1913), xvi. 187, 188 (1914), xxiii. 150, 158, 165, 260 (1921).

Rorippa palustris (L.) Bess. appears on p. 278, but that name in the specific category goes back only to *Radicula palustris* Moench (1794). An earlier specific name was *Sisymbrium islandicum* Oeder (1768), validated by Murr. Nov. Comm. Gott. (1773), with the resultant correct combination, *R. islandica* (Oeder ex Murr.) Borbás. For detailed discussion see notes by the present reviewer in RHODORA, xxx. 131 (1928), xxxi. 17 (1929) and by Butters & Abbe, *ibid.* xlii. 26 (1940).

Aruncus vulgaris Raf. (1838) is taken up (p. 413) for all species of the genus, whether Eurasian or eastern or western American; but, as noted by the present reviewer in RHODORA, xxxviii. 181 (1936): “Under *Aruncus*, Rafinesque, in 1838, published two names: ‘Type *A. vulgaris* and *Americanus*’. No diagnoses were given and no previous descriptions cited; the two names of Rafinesque are absolute *nomina nuda* and have no further nomenclatural status.” The earliest specific name (except *Spiraea Aruncus* L.) in the whole series is *Actaea dioica* Walt. (1788), basis of *Aruncus dioica* (Walt.) Fernald, RHODORA, xli. 423 (1939). If Abrams does not care for the characters of flower and fruit pointed out and illustrated in RHODORA, xxxvii. pl. 416, and treats the genus as a monotype, there is no evident escape from *A. dioica*.

In the case of *Oxytropis deflexa* (Pall.) DC. (p. 613, fig. 2919) Abrams keeps up that name, based upon *Astragalus deflexus* Pall., who gave a beautiful plate of his species of Transbaikalia, with calyx-tube truncate, with broad rectangular sinuses between the short and setaceous teeth. Material from the type-region, in the Gray Herbarium, exactly agrees with Pallas’s plate. It is not at all the North American plant which has erroneously passed as *O. deflexa*. The latter species, with long, lanceolate calyx-teeth and narrow sinuses, is *O. retrorsa* Fernald, RHODORA, xxx. 140 (1928).

One hesitates to speak of *Lathyrus maritimus* "(L.) Bigelow". If we could conserve specific names *L. maritimus* Bigelow would go into the first list, but not as "(L.) Bigelow", for, as shown in RHODORA, xxxiv. 184 et seq. (1932), "Bigelow in 1824 published as a wholly NEW SPECIES, *Lathyrus maritimus*, based on a wholly NEW TYPE, the plant of the Boston region . . . , and particularly emphasized that the Boston plant is not the European *Pisum maritimum* because it is 'decidedly a Lathyrus.'" The detailed and necessarily intricate discussion need not here be quoted, but the earliest available name proved to be *L. japonicus* Willd. (1803), a name at present not particularly attractive. But, under the rules, *L. maritimus* is inadmissible, one of the unfortunate cases resulting from following rules.

A review, although legitimately noting the points with which the reviewer differs, should not, naturally, overstress these matters. Only one other such item will be noted: the taking up of *Potentilla pumila* (Rydb.) Fedde (1910). A glimpse into any eastern handbook (Britton & Brown, Britton's Manual, Gray's Manual or Small's Flora), to say nothing of the monograph of Wolf or Rydberg's monograph, would have revealed *P. pumila* Poiret (1804). The western species needs a new name.

Altogether the second volume of Abrams's Illustrated Flora is a wonderfully interesting, not to say provocative, book. In general its treatments are careful and evidently sound and its new illustrations are attractive and evidently painstakingly accurate. It is bound to be in great demand and every one interested in good old-fashioned "descriptive botany" will need it.—M. L. F.

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